



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,677	10/17/2003	Allen J. Eichler	4646-0102P	8288

2292 7590 03/16/2007  
BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER	
HOANG, HIEU T	
ART UNIT	PAPER NUMBER
2152	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/16/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/16/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

10/686,677

Applicant(s)

EICHLER ET AL.

Examiner

Hieu T. Hoang

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/20/2004</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The specification is objected to because of the following informalities: the labeling numbers of items of fig. 5 in the detailed description e.g. on pages 17 and 18 are inconsistent with the labeling numbers in figure 5. For example, info display is labeled item 504 in the drawing but the specification refers to the info display as item 508. See also, item 508 and field of influence.

Appropriate correction is required.

2. The use of colors in [0055] with respect to the drawings is objected to because examiner can only see black and white colors in the drawings.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Diot et al. (A Distributed Architecture for Multiplayer Interactive Applications on the Internet.

Art Unit: 2152

<http://ieeexplore.ieee.org/iel5/65/16879/00777437.pdf?arnumber=777437>,

hereafter Diot.)

5. For claim 1, Diot discloses a method for providing multi-user participation in an application over a network (abstract, a multiplayer game on the Internet) comprising:

- providing for a user to affect a virtual state of an application on a network (page 7, MiMaze design characteristics);
- determining a safe latency for the user (fig. 3, safe latency is playout delay  $t_d$ , the sum of transmission delay and synchronization delay);
- determining a field of influence and a field of commitment based upon the determined safe latency (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) when the input from the user does not affect game play because of the playout delay, field of influence is the time or its corresponding spatial dimension after bucket synchronization or  $t_d$ );
- permitting the user input to affect a field of influence and prohibiting the user from affecting the field of commitment (fig. 3, bucket d, section 2.2., par. 2, application data unit ADU or user input is delayed in the bucket d, user input cannot affect the field of commitment (or the field from  $t_0$  to  $t_d$ ), user input otherwise can affect the field of influence after  $t_d$ ); and
- displaying the virtual state of the application (fig. 3), wherein the virtual state includes the field of influence and field of commitment (fig. 3), and

wherein a portion of the field of influence becomes the field of commitment after the determined network latency has expired (fig. 3, when  $t_0$  becomes greater than  $t_b$ , a portion of the field of influence becomes the field of commitment, since playout delay is a static parameter).

6. For claim 11, Diot discloses a computer-readable medium containing instructions, executed by a processor, for performing a method of providing multi-user participation in an application over a network comprising:

- providing for a user to affect a virtual state of an application on a network (page 7, MiMaze design characteristics);
- determining a safe latency for the user (fig. 3, safe latency is playout delay  $t_d$ , the sum of transmission delay and synchronization delay);
- determining a field of influence and a field of commitment based upon the determined safe latency (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) when the input from the user does not affect game play because of the playout delay, field of influence is the time or its corresponding spatial dimension after bucket synchronization or  $t_d$ );
- permitting the user input to affect a field of influence and prohibiting the user from affecting the field of commitment (fig. 3, bucket d, section 2.2., par. 2, application data unit ADU or user input is delayed in the bucket d, user input cannot affect the field of commitment (or the field from  $t_0$  to  $t_d$ ), user input otherwise can affect the field of influence after  $t_d$ ); and

Art Unit: 2152

- displaying the virtual state of the application, wherein the virtual state includes the field of influence and field of commitment, and wherein a portion of the field of influence becomes the field of commitment after the determined safe latency has expired (fig. 3, when  $t_0$  becomes greater than  $t_b$ , a portion of the field of influence becomes the field of commitment, since playout delay is a static parameter).

7. For claim 21, Diot discloses an apparatus for providing multi-user participation in an application over a network comprising: a memory storing a program; and a processor responsive to the program to:

- provided for a user to affect a virtual state of an application on a network (page 7, MiMaze design characteristics);
- determine a safe latency for the user (fig. 3, safe latency is playout delay  $t_d$ , the sum of transmission delay and synchronization delay);
- determine a field of influence and a field of commitment based upon the determined safe latency (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) when the input from the user does not affect game play because of the playout delay, field of influence is the time or its corresponding spatial dimension after bucket synchronization or  $t_d$ );
- permit the user input to affect a field of influence and prohibiting the user from affecting the field of commitment (fig. 3, bucket d, section 2.2., par. 2, application data unit ADU or user input is delayed in the bucket d, user

Art Unit: 2152

input cannot affect the field of commitment (or the field from  $t_0$  to  $t_d$ ), user

input otherwise can affect the field of influence after  $t_d$ ); and

- display the virtual state of the application, wherein the virtual state includes the field of influence and field of commitment, and wherein a portion of the field of influence becomes the field of commitment after the determined safe latency has expired (fig. 3, when  $t_0$  becomes greater than  $t_b$ , a portion of the field of influence becomes the field of commitment, since playout delay is a static parameter).

8. For claims 2, 12, and 22, Diot further discloses the field of influence and the field of commitment are displayed (fig. 3, fig. 1, the two fields are spatial dimensions corresponding to time).

9. For claims 3, 13, and 33, Diot further discloses the field of influence and the field of commitment are two-dimensional (fig. 1).

10. For claims 4, 14, and 24, Diot further discloses the field of commitment is displayed graphically different than the field of influence (fig. 3, displaying the field of commitment is displayed graphically different than the field of influence is a design implementation or design choice).

Art Unit: 2152

11. For claims 5, 15, and 25, Diot further discloses the field of commitment is displayed in a first color and wherein the field of influence is displayed in a second color (this is just a design implementation of claim 4).

12. For claims 6, 16, and 26, Diot further discloses the displayed field of commitment is represented by a line that represents a path wherein the user is committed (fig. 3, field of commitment is the distance equivalence of the playout delay).

13. For claims 7, 17, and 27, Diot further discloses displayed field of influence includes a graphic indicating options available to the user (fig. 3, again this is a design choice).

14. For claims 8, 18, and 28, Diot further discloses the graphic indicating options available to the user is at least two arrows indicating the possible directions available to the user (this is just a design implementation or design choice, since the user still can affect game-play even without the arrows).

15. For claims 9, 19, and 29, Diot further discloses users operate on different hardware platforms (abstract, a desktop computer and a laptop which players use to play the game are different hardware platforms).



Art Unit: 2152

16. For claims 10, 20, and 30, Diot further discloses the user may communicate with at least one other user or invite the other user to access the application, wherein the communication may be made by at least one of voice, text, image, or video data (abstract, playing a game is communicating using images, page 7, MiMaze distributed architecture, par. 1, a user can join a session, fig. 1, participant information, icons).

17. For claim 31, Diot discloses a method of compensating for network latencies (abstract), comprising:

- determining a safe latency associated with a client in a multi-client application (fig. 3, safe latency is playout delay  $t_d$ , the sum of transmission delay and synchronization delay);
- computing, based upon the determined safe latency for the client, a first state configured to receive client input (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) that the game input from the user does not affect game play because of the playout delay, field of influence is the time or its corresponding spatial dimension that is after bucket synchronization or  $t_d$ );
- computing, based upon the determined safe latency for the client, a second state unaffected by client input (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) that the game input from the user does not affect game play because of the playout delay); and

Art Unit: 2152

- re-computing the first state and the second state for the client as the application progresses (fig. 3, as time progresses, portion of the field of commitment will overlap with the old field of influence).

18. For claim 39, Diot discloses a computer-readable medium containing instructions, executed by a processor, for performing a method of compensating for network latencies (abstract), comprising:

- determining a safe latency associated with a client in a multi-client application (fig. 3, safe latency is playout delay  $t_d$ , the sum of transmission delay and synchronization delay);
- computing, based upon the determined safe latency for the client, a first state configured to receive client input (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) that the game input from the user does not affect game play because of the playout delay, field of influence is the time or its corresponding spatial dimension that is after bucket synchronization or  $t_d$ );
- computing, based upon the determined safe latency for the client, a second state unaffected by client input (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) that the game input from the user does not affect game play because of the playout delay); and

Art Unit: 2152

- re-computing the first state and the second state for the client as the application progresses (fig. 3, as time progresses, portion of the field of commitment will overlap with the old field of influence).

**19.** For claim 47, Diot discloses an apparatus for compensating for network latencies, comprising: a memory storing a program; and a processor responsive to the program to:

- determine a safe latency associated with a client in a multi-client application (fig. 3, safe latency is playout delay  $t_d$ , the sum of transmission delay and synchronization delay);
- compute based upon the determined safe latency for the client, a first state configured to receive client input (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) that the game input from the user does not affect game play because of the playout delay, field of influence is the time or its corresponding spatial dimension that is after bucket synchronization or  $t_d$ );
- compute based upon the determined safe latency for the client, a second state unaffected by client input (fig. 3, field of commitment is the time or its corresponding spatial dimension (e.g. distance) that the game input from the user does not affect game play because of the playout delay); and
- re-compute the first state and the second state for each client as the application progresses (fig. 3, as time progresses, portion of the field of

Art Unit: 2152

commitment will overlap with the old field of influence).

20. For claims 32, 40, and 48, Diot further discloses 31, wherein the first state and the second state represent virtual spatial dimensions (fig. 1, fig. 3, 2D spatial dimensions are equivalence of time translated into space).

21. For claims 33, 41, and 49, Diot further discloses 32, wherein the spatial dimensions are two dimensional (fig. 1, fig. 3, 2D spatial dimensions are equivalence of time translated into space).

22. For claims 34, 42, and 50, Diot further discloses the first state corresponds to a field of influence and the second state corresponds to a field of commitment (the same rationale as claims 31, 39, and 47).

23. For claims 35, 43, and 51, Diot further discloses:

- displaying the field of influence and the field of commitment (fig. 3, fig. 1);  
and
- transforming a portion of the field of influence into the field of commitment after the determined safe latency has expired (fig. 3, when  $t_0$  becomes greater than  $t_b$ , a portion of the field of influence becomes the field of commitment, since playout delay is a static parameter).

Art Unit: 2152

24. For claims 36, 44, and 52, the claims are rejected for the same rationale as claims 4, 14, and 24.

25. For claims 37, 38, 45, 46, 53, and 54, the claims are rejected for the same rationale as claims 9, 19, and 29.

***Claim Rejections - 35 USC § 103***

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Diot, as applied to claim 1 above, in view of Grobicki et al. (US 5,471,474, hereafter Grobicki).

28. For claim 55, Diot discloses the invention substantially as described in claim 1. Diot does not implicitly disclose the method further includes: transmitting data in sequenced packets to the user; determining a packet has not been received in a timely manner by the user; and reducing the number of packets to be sent to clear a backlog of subsequent packets by concatenating the subsequent packets together.

However, Grobicki discloses the same (abstract, a method of concatenating of data packets to reduce overhead, each packet has a sequence number).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Diot and Grobicki in order to reduce network overhead of Diot's system (such as routing error control involving retransmission of data received in error) (Grobicki, abstract).

### ***Conclusion***

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-

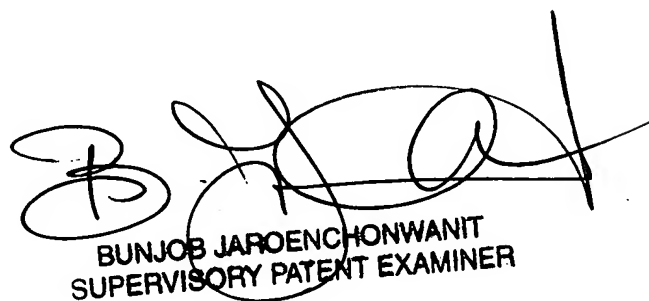
Art Unit: 2152

3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HH

HH

  
BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER